

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P557536

Luminaire Tested: **FUSL-12-4-LD4-2STD-35-UNV-93-84-EDD-90**

Issue Date: 7/16/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P557536  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-257-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FUSL-12-4-LD4-2STD-35-UNV-93-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

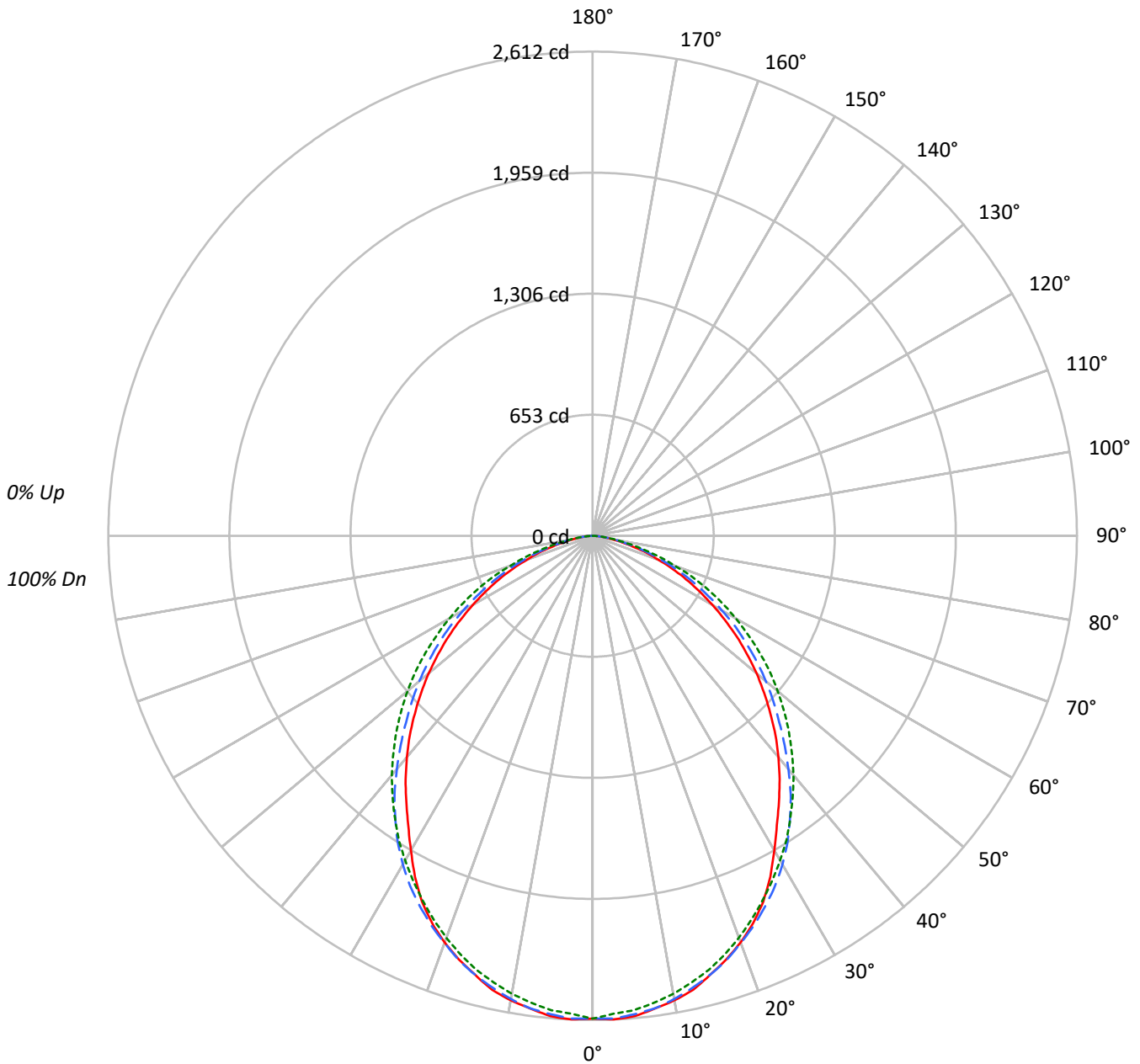
Lumens per Lamp: N/A  
Luminaire Lumens: 6023.0 lumens  
Efficiency: N/A  
Efficacy: 90.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73																			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63																			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54																			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47																			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42																			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37																			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34																			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30																			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7009	7009	7009
5°	7028	6998	6939
10°	6954	6934	6855
15°	6830	6830	6752
20°	6686	6694	6608
25°	6465	6546	6442
30°	6088	6362	6284
35°	5753	6098	6108
40°	5473	5768	5920
45°	5160	5419	5697
50°	4830	5107	5454
55°	4456	4751	5160
60°	4012	4336	4799
65°	3543	3855	4365
70°	2953	3283	3708
75°	2321	2622	2903
80°	1660	1846	2047
85°	1081	1081	1019



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	245.2	4.1
10°-20°	689.0	11.4
20°-30°	1006.8	16.7
30°-40°	1142.8	19.0
40°-50°	1103.2	18.3
50°-60°	910.1	15.1
60°-70°	606.1	10.1
70°-80°	271.2	4.5
80°-90°	48.5	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1941.0	32.2
0°-40°	3083.9	51.2
0°-60°	5097.2	84.6
0°-90°	6023.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6023.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2605	2605	2605	2605	2605	
5°	2602	2601	2591	2577	2569	246
15°	2452	2458	2452	2441	2424	691
25°	2178	2194	2204	2188	2170	997
35°	1751	1775	1856	1866	1859	1097
45°	1356	1379	1424	1489	1497	1046
55°	950	966	1013	1069	1100	848
65°	556	571	605	648	686	552
75°	223	235	252	264	279	244
85°	35	35	35	33	33	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2604.8	2604.8	2604.8	2604.8	2604.8
2.5°	2611.8	2612.8	2606.8	2590.8	2580.8
5°	2601.8	2600.8	2590.8	2576.8	2568.8
7.5°	2572.8	2574.8	2571.8	2551.8	2540.7
10°	2544.8	2545.8	2537.7	2521.7	2508.7
12.5°	2508.7	2507.7	2496.7	2488.7	2467.7
15°	2451.7	2457.7	2451.7	2440.7	2423.7
17.5°	2396.6	2396.6	2400.7	2381.6	2368.6
20°	2334.6	2337.6	2337.6	2322.6	2307.6
22.5°	2262.6	2271.6	2274.6	2258.6	2240.5
25°	2177.5	2194.5	2204.5	2188.5	2169.5
27.5°	2074.4	2100.4	2130.5	2118.5	2097.4
30°	1959.3	1997.4	2047.4	2037.4	2022.4
32.5°	1850.3	1888.3	1957.3	1953.3	1945.3
35°	1751.2	1775.2	1856.3	1866.3	1859.3
37.5°	1657.1	1679.2	1755.2	1778.2	1772.2
40°	1558.1	1582.1	1642.1	1683.2	1685.2
42.5°	1460.0	1483.0	1532.1	1591.1	1591.1
45°	1355.9	1378.9	1424.0	1489.0	1497.0
47.5°	1253.9	1277.9	1321.9	1387.0	1400.0
50°	1153.8	1175.8	1219.8	1282.9	1302.9
52.5°	1049.7	1073.7	1116.8	1174.8	1203.8
55°	949.7	965.7	1012.7	1068.7	1099.8
57.5°	845.6	860.6	913.6	961.7	993.7
60°	745.5	764.5	805.6	854.6	891.6
62.5°	649.4	669.5	704.5	747.5	789.5
65°	556.4	571.4	605.4	648.4	685.5
67.5°	466.3	479.3	513.4	543.4	582.4
70°	375.3	392.3	417.3	446.3	471.3
72.5°	302.2	309.2	330.2	351.2	377.3
75°	223.2	235.2	252.2	264.2	279.2
77.5°	160.1	167.1	177.1	187.1	201.1
80°	107.1	110.1	119.1	121.1	132.1
82.5°	65.0	67.0	69.0	70.0	74.1
85°	35.0	35.0	35.0	33.0	33.0
87.5°	20.0	20.0	17.0	14.0	10.0
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)